

Exhibit 300 (BY2010)

PART ONE	
OVERVIEW	
1. Date of Submission:	2008-09-08
2. Agency:	026
3. Bureau:	00
4. Name of this Capital Asset:	KSC Shuttle Launch Control System (LCS)
5. Unique Project Identifier:	026-00-01-05-01-1409-00
6. What kind of investment will this be in FY2010?	
Operations and Maintenance	
7. What was the first budget year this investment was submitted to OMB?	
FY2001 or earlier	
8. Provide a brief summary and justification for this investment, including a brief description of how this closes in part or in whole an identified agency performance gap.	
<p>The Launch Control System (LCS) investment maintains the unique hardware and software used at Kennedy Space Center to process and launch the Space Shuttle. The complex computer hardware and software provides control and monitor functionality as well as the capability to record and simultaneously playback near real-time telemetry. The system currently operates with 100 computer consoles using 12 million lines of custom source code. The LCS reliability is man-rated. The LCS consists of Shuttle Data Center (SDC), Checkout Control and Monitor Subsystem (CCMS) Operations, Record and Playback Subsystem (RPS), and Other Supporting Systems (Other O&M). The Shuttle Data Center provides storage and recall of all shuttle processing and launch data. The CCMS is a custom designed computer hardware and software system for processing and launching the Space Shuttle. The system currently operates with 100 consoles, 240 peripherals, 12 million lines of Launch Processing System (LPS) source code, and 1.6 million lines of executable Ground Operations Aerospace Language (GOAL) code. The Record and Playback Subsystem (RPS) primary function is to record unprocessed Shuttle on-board instrumentation data during tests and launch countdowns. The Space Shuttle program and the functions supported by this IT investment have existed since the mid 1970s. During this period the business management processes and the supporting financial management processes have changed to accommodate the evolving program needs and reporting requirements. Rita Willcoxon's Shuttle IT investments comprise approximately 16% of her financial oversight responsibility at KSC. While NASA can report life-cycle costs for this program and its major projects, it is extremely difficult to trace back the entire life-cycle costs history associated with this IT investment. In Fiscal Year (FY) 2003 NASA moved to a full-cost budgeting environment. For the purpose of this OMB Exhibit 300, the life cycle costs reported cover FY 2006 through the planned termination of the program which the IT investment supports. The LCS is a steady state investment in the operational phase of its life cycle. The loss of this investment would require us to revert to manual based systems. This would increase our headcount and impact our processing schedule. Current planning shows the Space Shuttle program ending in 2010.</p>	
9. Did the Agency's Executive/Investment Committee approve this request?	
yes	
9.a. If "yes," what was the date of this approval?	
2008-06-19	
10. Did the Program/Project Manager review this Exhibit?	
yes	
11. Program/Project Manager Name:	
Rita Willcoxon	
Program/Project Manager Phone:	
321.867.4343	
Program/Project Manager Email:	
rita.g.willcoxon@nasa.gov	
11.a. What is the current FAC-P/PM certification level of the project/program manager?	
Senior/Expert/DAWIA-Level 3	

11.b. When was the Program/Project Manager Assigned?	
2006-12-01	
11.c. What date did the Program/Project Manager receive the FACP/PM certification? If the certification has not been issued, what is the anticipated date for certification?	
2008-08-08	
12. Has the agency developed and/or promoted cost effective, energy-efficient and environmentally sustainable techniques or practices for this project.	
yes	
12.a. Will this investment include electronic assets (including computers)?	
yes	
12.b. Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only)	
no	
13. Does this investment directly support one of the PMA initiatives?	
yes	
If yes, select the initiatives that apply:	
Competitive Sourcing	
Expanded E-Government	
Financial Performance	
13.a. Briefly and specifically describe for each selected how this asset directly supports the identified initiative(s)? (e.g. If E-Gov is selected, is it an approved shared service provider or the managing partner?)	
The LCS system has been developed and maintained over many years. Modifications and upgrades have been performed based upon new technology and evolving knowledge of the requirements of launching a human-rated vehicle into space. Many modifications are unique to Space Vehicle Processing and not readily available from general industry. When modifications are required the Agency adheres to Federal regulations of competitive sourcing, E-Government, and financial performance.	
14. Does this investment support a program assessed using the Program Assessment Rating Tool (PART)?	
yes	
14.a. If yes, does this investment address a weakness found during the PART review?	
no	
14.b. If yes, what is the name of the PARTed program?	
10000346 - Space Shuttle	
14.c. If yes, what rating did the PART receive?	
Adequate	
15. Is this investment for information technology?	
yes	
16. What is the level of the IT Project (per CIO Council's PM Guidance)?	
Level 3	
17. What project management qualifications does the Project Manager have? (per CIO Council's PM Guidance)	
(1) Project manager has been validated as qualified for this investment	
18. Is this investment identified as high risk on the Q4 - FY 2008 agency high risk report (per OMB memorandum M-05-23)?	
no	
19. Is this a financial management system?	
no	
20. What is the percentage breakout for the total FY2010 funding request for the following? (This should total 100%)	
Hardware	18
Software	19

Services	63																																			
Other	0																																			
21. If this project produces information dissemination products for the public, are these products published to the Internet in conformance with OMB Memorandum 05-04 and included in your agency inventory, schedules and priorities?																																				
n/a																																				
22. Contact information of individual responsible for privacy related questions.																																				
Name																																				
Mark Mason																																				
Phone Number																																				
321-867-3014																																				
Title																																				
KSC Information Officer																																				
Email																																				
mark.mason@nasa.gov																																				
23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval?																																				
yes																																				
24. Does this investment directly support one of the GAO High Risk Areas?																																				
no																																				
SUMMARY OF SPEND																																				
1. Provide the total estimated life-cycle cost for this investment by completing the following table. All amounts represent budget authority in millions, and are rounded to three decimal places. Federal personnel costs should be included only in the row designated Government FTE Cost, and should be excluded from the amounts shown for Planning, Full Acquisition, and Operation/Maintenance. The total estimated annual cost of the investment is the sum of costs for Planning, Full Acquisition, and Operation/Maintenance. For Federal buildings and facilities, life-cycle costs should include long term energy, environmental, decommissioning, and/or restoration costs. The costs associated with the entire life-cycle of the investment should be included in this report.																																				
All amounts represent Budget Authority																																				
(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)																																				
<table border="1"> <thead> <tr> <th></th> <th>PY-1 & Earlier</th> <th>PY</th> <th>CY</th> <th>BY</th> </tr> <tr> <th></th> <th>-2007</th> <th>2008</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>Planning Budgetary Resources</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Acquisition Budgetary Resources</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Maintenance Budgetary Resources</td> <td>223.916</td> <td>65.6004</td> <td>45.1469</td> <td>41.6279</td> </tr> <tr> <td>Government FTE Cost</td> <td>0.111</td> <td>0.0119</td> <td>0.0125</td> <td>0.0129</td> </tr> <tr> <td># of FTEs</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>			PY-1 & Earlier	PY	CY	BY		-2007	2008	2009	2010	Planning Budgetary Resources	0	0	0	0	Acquisition Budgetary Resources	0	0	0	0	Maintenance Budgetary Resources	223.916	65.6004	45.1469	41.6279	Government FTE Cost	0.111	0.0119	0.0125	0.0129	# of FTEs	0	0	0	0
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# of FTEs	0	0	0	0																																
Note: For the cross-agency investments, this table should include all funding (both managing partner and partner agencies).																																				
Government FTE Costs should not be included as part of the TOTAL represented.																																				
2. Will this project require the agency to hire additional FTE's?																																				
no																																				
3. If the summary of spending has changed from the FY2009 President's budget request, briefly explain those changes.																																				
The budgetary increase in 2008 reflects new requirements for the first test flight of NASA's new Ares 1-X booster. Ares I-X will be launched from Launch Complex 39-B at NASA's Kennedy Space Center in Florida.																																				

PERFORMANCE

In order to successfully address this area of the exhibit 300, performance goals must be provided for the agency and be linked to the annual performance plan. The investment must discuss the agency's mission and strategic goals, and performance measures (indicators) must be provided. These goals need to map to the gap in the agency's strategic goals and objectives this investment is designed to fill. They are the internal and external performance benefits this investment is expected to deliver to the agency (e.g., improve efficiency by 60 percent, increase citizen participation by 300 percent a year to achieve an overall citizen participation rate of 75 percent by FY 2xxx, etc.). The goals must be clearly measurable investment outcomes, and if applicable, investment outputs. They do not include the completion date of the module, milestones, or investment, or general goals, such as, significant, better, improved that do not have a quantitative measure.

Agencies must use the following table to report performance goals and measures for the major investment and use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). Map all Measurement Indicators to the corresponding Measurement Area and Measurement Grouping identified in the PRM. There should be at least one Measurement Indicator for each of the four different Measurement Areas (for each fiscal year). The PRM is available at www.egov.gov. The table can be extended to include performance measures for years beyond the next President's Budget.

	Fiscal Year	Strategic Goal Supported	Measurement Area	Measurement Grouping	Measurement Indicator	Baseline	Planned Improvement to the Baseline	Actual Results
1	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Customer Satisfaction	End User Satisfaction through the measurement of number of CRs implemented to user's satisfaction.	100%	100%	100%
2	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Delivery Time	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Maintain SOE of 95% on-time delivery Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	100%
3	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Technology	Service Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensures space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	100%
4	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Processes and Activities	Complaints	Monthly average of 4 or less DRs across released LCS applications supports both the Programs overall reliability and ensures affordability of the systems	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports	Maintain SOE of 4 or less discrepancies (DRs) against LCS released applications each year from 2005 to 2010	3

						(DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs		
5	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Mission and Business Results	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2010. Mission success criteria are those provided to the prime contractor for contract performance fee determination	100%	100%	100%
6	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Customer Satisfaction	End User Satisfaction through the measurement of number of CRs implemented to user's satisfaction.	100%	100%	100%
7	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Delivery Time	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Maintain SOE of 95% on-time delivery Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	100%
8	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Technology	Service Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensure space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	100%
9	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Processes and Activities	Complaints	Monthly average of 4 or less DRs across LCS applications supports Program's reliability and ensures affordability of the systems. Goal	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less	Maintain SOE of 4 or less discrepancies (DRs) against LPS released applications each year from 2005 to 2010	3

					8: Ensure the provision of space access, and improve it by increasing safety, reliability, and affordability	Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs		
10	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Mission and Business Results	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2010. Mission success criteria are those provided to the prime contractor for contract performance fee determination	100%	100%	100%
11	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Customer Satisfaction	End User Satisfaction through the measurement of number of CRs implemented to user's satisfaction.	100%	100%	TBD
12	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Delivery Time	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Maintain SOE of 95% on-time delivery Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	TBD
13	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Technology	Service Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensure space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	TBD
14	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Processes and Activities	Complaints	Monthly average of 4 or less DRs across released LCS applications supports both the Programs overall reliability and ensures	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence	Maintain SOE of 4 or less discrepancies (DRs) against LCS released applications each year from 2005 to 2010	TBD

					affordability of the systems	(SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs		
15	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Mission and Business Results	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2010. Mission success criteria are those provided to the prime contractor for contract performance fee determination	100%	100%	TBD
16	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Customer Satisfaction	End User Satisfaction through the measurement of number of CRs implemented to user's satisfaction.	100%	100%	TBD
17	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Delivery Time	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Maintain SOE of 95% on-time delivery Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	TBD
18	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Technology	Service Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensure space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	TBD
19	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement,	Processes and Activities	Complaints	Monthly average of 4 or less DRs across released LCS applications supports both the Programs overall	Monthly average of 4 or less DRs across released LCS applications	Maintain SOE of 4 or less discrepancies (DRs) against LCS released applications	TBD

		not later than 2010.			reliability and ensures affordability of the systems	Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	each year from 2005 to 2010	
20	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Mission and Business Results	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2010. Mission success criteria are those provided to the prime contractor for contract performance fee determination	100%	100%	TBD

EA

In order to successfully address this area of the business case and capital asset plan you must ensure the investment is included in the agency's EA and Capital Planning and Investment Control (CPIC) process, and is mapped to and supports the FEA. You must also ensure the business case demonstrates the relationship between the investment and the business, performance, data, services, application, and technology layers of the agency's EA.

1. Is this investment included in your agency's target enterprise architecture?

yes

2. Is this investment included in the agency's EA Transition Strategy?

yes

2.a. If yes, provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment.

KSC Shuttle Launch Control System

3. Is this investment identified in a completed (contains a target architecture) and approved segment architecture?

yes

3.a. If yes, provide the six digit code corresponding to the agency segment architecture. The segment architecture codes are maintained by the agency Chief Architect.

463-000

4. Identify the service components funded by this major IT investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to <http://www.whitehouse.gov/omb/egov/>.

Component: Use existing SRM Components or identify as NEW. A NEW component is one not already identified as a service component in the FEA SRM.

Reused Name and UPI: A reused component is one being funded by another investment, but being used by this investment. Rather than answer yes or no, identify the reused service component funded by the other investment and identify the other investment using the Unique Project Identifier (UPI) code from the OMB Ex 300 or Ex 53 submission.

Internal or External Reuse?: Internal reuse is within an agency. For example, one agency within a department is reusing a service component provided by another agency within the same department. External reuse is one agency within a department reusing a service component provided by another agency in another department. A good example of this is an E-Gov initiative service being reused by multiple organizations across the federal government.

Funding Percentage: Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the funding level transferred to another agency to pay for the service.

	Agency Component Name	Agency Component Description	Service Type	Component	Reused Component Name	Reused UPI	Internal or External Reuse?	Funding %
1	Space and Ground Network IT Support	LCS provides 7x24 support to handle issues and problems with any LCS sub-system	Customer Relationship Management	Call Center Management			No Reuse	1
2	Space and Ground Network IT Support	Products are managed through a combination of the Documentum, Maximo, and Peoplesoft enterprise tools	Customer Relationship Management	Product Management			No Reuse	1
3	Space and Ground Network IT Support	Electronic access to LCS requires completion and approval of a computer user registration form and management level approval. Physical access requires appropriate Area Access rights	Customer Relationship Management	Customer / Account Management			No Reuse	1
4	Space and Ground Network IT Support	Microsoft Outlook maintains department, user, and function specific distribution lists	Customer Relationship Management	Contact and Profile Management			No Reuse	1
5	Space and Ground Network IT Support	USA and NASA LCS management hold regular briefings to discuss current project status	Customer Relationship Management	Partner Relationship Management			No Reuse	1
6	Space and Ground Network IT Support	NASA provides a Contractor Evaluation to USA LCS every three months	Customer Relationship Management	Customer Feedback			No Reuse	1
7	Space and Ground Network IT Support	LCS utilizes web-based "One-Minute" surveys to gather information	Customer Relationship Management	Surveys			No Reuse	1
8	Space and Ground Network IT Support	LCS applications provide user interface preference settings	Customer Preferences	Personalization			No Reuse	1
9	Space and Ground Network IT Support	Web sites provide information on how to access and utilize LCS sub-systems	Customer Initiated Assistance	Online Help			No Reuse	2
10	Space and Ground Network IT Support	Web sites provide information on how to access and utilize LCS sub-systems	Customer Initiated Assistance	Online Tutorials			No Reuse	2
11	Space and Ground Network IT Support	Users can access a 24x7 help desk console by phone or submit electronic requests for	Customer Initiated Assistance	Assistance Request			No Reuse	1

		service.						
12	Space and Ground Network IT Support	Users can access a 24x7 help desk console by phone or submit electronic requests for service.	Customer Initiated Assistance	Reservations / Registration			No Reuse	1
13	Space and Ground Network IT Support	Processes are tracked using Documentum	Tracking and Workflow	Process Tracking			No Reuse	2
14	Space and Ground Network IT Support	Issues are documented using Problem Reports or PRACA	Tracking and Workflow	Case Management			No Reuse	3
15	Space and Ground Network IT Support	Issues are escalated up through the USA and NASA management chain until resolution is reached	Tracking and Workflow	Conflict Resolution			No Reuse	1
16	Space and Ground Network IT Support	Microsoft Outlook is the standard USA tool for managing electronic communications	Routing and Scheduling	Inbound Correspondence Management			No Reuse	1
17	Space and Ground Network IT Support	Microsoft Outlook is the standard USA tool for managing electronic communications	Routing and Scheduling	Outbound Correspondence Management			No Reuse	1
18	Space and Ground Network IT Support	Changes are managed through a Change Control Board (CCB) and controlled electronically through SCMS, Maximo, and Documentum	Management of Processes	Change Management			No Reuse	3
19	Space and Ground Network IT Support	CM is maintained through Documentum, Maximo, and Peoplesoft	Management of Processes	Configuration Management			No Reuse	3
20	Space and Ground Network IT Support	Software requirements are managed through DOORS and RPRS	Management of Processes	Requirements Management			No Reuse	3
21	Space and Ground Network IT Support	LCS utilizes Microsoft Project, Maximo, and Peoplesoft for project management	Management of Processes	Program / Project Management			No Reuse	1
22	Space and Ground Network IT Support	Policies are maintained and managed through Documentum	Management of Processes	Governance / Policy Management			No Reuse	3
23	Space and Ground Network IT Support	Quality processes are controlled through Documentum and Maximo	Management of Processes	Quality Management			No Reuse	2
24	Space and Ground	Business rules are enforced through	Management of Processes	Business Rule Management			No Reuse	1

	Network IT Support	Documentum, Maximo and Peoplesoft						
25	Space and Ground Network IT Support	LCS uses the standard USA Risk Management process	Management of Processes	Risk Management			No Reuse	2
26	Space and Ground Network IT Support	LCS utilizes the standard USA suite of Office tools	Organizational Management	Workgroup / Groupware			No Reuse	2
27	Space and Ground Network IT Support	Network management is performed using HP Open View	Organizational Management	Network Management			No Reuse	2
28	Space and Ground Network IT Support	Microsoft Project, Excel, and Word are used for strategic planning efforts	Investment Management	Strategic Planning and Mgmt			No Reuse	1
29	Space and Ground Network IT Support	LCS performance is managed in the COF using the HP Open View tool suite	Investment Management	Performance Management			No Reuse	2
30	Space and Ground Network IT Support	Maximo is used for work authoring capabilities.	Content Management	Content Authoring			No Reuse	2
31	Space and Ground Network IT Support	Electronic signatures are used in Maximo to approve work	Content Management	Content Review and Approval			No Reuse	1
32	Space and Ground Network IT Support	LCS Documentation uses documentation scanners and software	Document Management	Document Imaging and OCR			No Reuse	2
33	Space and Ground Network IT Support	Documents are posted in Documentum and available on the intranet	Document Management	Document Referencing			No Reuse	3
34	Space and Ground Network IT Support	Frame maker and Microsoft Word software are used for Revision control of LCS Documentation	Document Management	Document Revisions			No Reuse	3
35	Space and Ground Network IT Support	Documents are managed in Documentum	Document Management	Library / Storage			No Reuse	3
36	Space and Ground Network IT Support	Documents are reviewed and approved in Documentum	Document Management	Document Review and Approval			No Reuse	3
37	Space and Ground Network IT Support	LCS Documentation handles conversions between different software file types when needed	Document Management	Document Conversion			No Reuse	3

38	Space and Ground Network IT Support	LCS supports Indexing by maintaining the infrastructure including servers, document management software, storage and network services	Document Management	Indexing			No Reuse	2
39	Space and Ground Network IT Support	LCS supports Classification by maintaining the infrastructure including servers, document management software, storage and network services	Document Management	Indexing			No Reuse	2
40	Space and Ground Network IT Support	LCS supports Information Retrieval by maintaining the infrastructure including servers, databases, storage and network services	Knowledge Management	Information Retrieval			No Reuse	3
41	Space and Ground Network IT Support	Information is shared via the intranet	Knowledge Management	Information Sharing			No Reuse	2
42	Space and Ground Network IT Support	Related information can be linked via Documentum or on the intranet	Records Management	Record Linking / Association			No Reuse	2
43	Space and Ground Network IT Support	Documentum provides classification types for LCS documents	Records Management	Document Classification			No Reuse	2
44	Space and Ground Network IT Support	LCS information is archived to tape or CD when immediate access is no longer required	Records Management	Document Retirement			No Reuse	2
45	Space and Ground Network IT Support	LCS creates math models for use in simulations	Knowledge Discovery	Modeling			No Reuse	3
46	Space and Ground Network IT Support	LCS creates math models for use in simulations	Analysis and Statistics	Mathematical			No Reuse	1
47	Space and Ground Network IT Support	Microsoft Excel is the standard USA tool for creating graphs. Microsoft Powerpoint is the standard USA tool for creating briefing charts	Visualization	Graphing / Charting			No Reuse	1
48	Space and Ground Network IT Support	LCS imagery is stored and viewed on the intranet	Visualization	Imagery			No Reuse	1

49	Space and Ground Network IT Support	CAD work is performed using AutoCad	Visualization	CAD			No Reuse	3
50	Space and Ground Network IT Support	The standard USA set of office tools is used to support planning efforts	Business Intelligence	Decision Support and Planning			No Reuse	1
51	Space and Ground Network IT Support	The standard USA set of office tools is used to support demand forecast	Business Intelligence	Demand Forecasting / Mgmt			No Reuse	1
52	Space and Ground Network IT Support	Data in LCS is exchanged via SDC, e-mail or the intranet	Data Management	Data Exchange			No Reuse	1
53	Space and Ground Network IT Support	LCS data is stored and archived via SDC or the USA Ground Ops networks	Data Management	Data Warehouse			No Reuse	1
54	Space and Ground Network IT Support	Loading and Archiving of data is accomplished via contacting the LPS support console in the COF	Data Management	Loading and Archiving			No Reuse	1
55	Space and Ground Network IT Support	Loading and Archiving of data is accomplished via contacting the LPS support console in the COF	Data Management	Data Recovery			No Reuse	1
56	Space and Ground Network IT Support	LCS employees are paid via the normal USA payroll system	Financial Management	Payroll			No Reuse	1
57	Space and Ground Network IT Support	LCS Financial data is audited in the USA business Management office	Financial Management	Auditing			No Reuse	1
58	Space and Ground Network IT Support	LCS Financial data is audited in the USA business Management office	Financial Management	Billing and Accounting			No Reuse	1

5. To demonstrate how this major IT investment aligns with the FEA Technical Reference Model (TRM), please list the Service Areas, Categories, Standards, and Service Specifications supporting this IT investment.

FEA SRM Component: Service Components identified in the previous question should be entered in this column. Please enter multiple rows for FEA SRM Components supported by multiple TRM Service Specifications.

Service Specification: In the Service Specification field, Agencies should provide information on the specified technical standard or vendor product mapped to the FEA TRM Service Standard, including model or version numbers, as appropriate.

	SRM Component	Service Area	Service Category	Service Standard	Service Specification (i.e., vendor and product name)
1	Inbound Correspondence Management	Service Access and Delivery	Access Channels	Web Browser	Microsoft Internet Explorer

2	Inbound Correspondence Management	Service Access and Delivery	Access Channels	Wireless / PDA	Palm OS
3	Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Internet	NISN
4	Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Intranet	NISN, USA
5	Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Extranet	NISN
6	Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Peer to Peer (P2P)	NISN, USA
7	Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Virtual Private Network (VPN)	Cisco
8	Configuration Management	Service Access and Delivery	Service Requirements	Legislative / Compliance	NASA Headquarters
9	Configuration Management	Service Access and Delivery	Service Requirements	Authentication / Single Sign-on	RSA Keon
10	Configuration Management	Service Access and Delivery	Service Requirements	Hosting	HP Proliant, Dell; Tru64, DEC; Linux, Redhat
11	Configuration Management	Service Access and Delivery	Service Transport	Supporting Network Services	Cisco Systems
12	Software Development	Service Platform and Infrastructure	Software Engineering	Test Management	N/A
13	Software Development	Service Platform and Infrastructure	Software Engineering	Modeling	Arena
14	Library / Storage	Service Platform and Infrastructure	Database / Storage	Database	Oracle
15	Library / Storage	Service Platform and Infrastructure	Database / Storage	Storage	Storage Tech, EMC
16	Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	HP Proliant, Dell
17	Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Embedded Technology Devices	N/A
18	Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Peripherals	HP Printers, Lanier Printers
19	Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Wide Area Network (WAN)	NISN
20	Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Local Area Network (LAN)	KICS
21	Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Cisco Systems
22	Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Video Conferencing	Microsoft Netmeeting
23	Risk Management	Component Framework	Security	Certificates / Digital Signatures	RSA Keon

24	Risk Management	Component Framework	Security	Supporting Security Services	ISS
25	Graphing / Charting	Component Framework	User Presentation / Interface	Static Display	Microsoft Visio, Powerpoint
26	Graphing / Charting	Component Framework	User Presentation / Interface	Dynamic Server-Side Display	Microsoft IIS Active Server Pages, Adobe Coldfusion
27	Graphing / Charting	Component Framework	User Presentation / Interface	Content Rendering	Autorender Pro
28	Graphing / Charting	Component Framework	User Presentation / Interface	Wireless / Mobile / Voice	AT&T, Sprint Nextel/Nokia, Samsung, Research in Motion
29	Configuration Management	Service Interface and Integration	Interoperability	Data Format / Classification	Track Studio
30	Configuration Management	Service Interface and Integration	Integration	Middleware	Oracle
31	Configuration Management	Service Interface and Integration	Integration	Enterprise Application Integration	Documentum
32	Record Linking / Association	Service Interface and Integration	Interoperability	Data Format / Classification	N/A
33	Record Linking / Association	Service Interface and Integration	Interoperability	Data Types / Validation	N/A
34	Record Linking / Association	Service Interface and Integration	Interoperability	Data Transformation	N/A
35	Configuration Management	Service Interface and Integration	Interface	Service Discovery	N/A
36	Configuration Management	Service Interface and Integration	Interface	Service Description / Interface	N/A

6. Will the application leverage existing components and/or applications across the Government (i.e., FirstGov, Pay.Gov, etc)?

no

PART THREE

RISK

You should perform a risk assessment during the early planning and initial concept phase of the investment's life-cycle, develop a risk-adjusted life-cycle cost estimate and a plan to eliminate, mitigate or manage risk, and be actively managing risk throughout the investment's life-cycle.

Answer the following questions to describe how you are managing investment risks.

1. Does the investment have a Risk Management Plan?

yes

1.a. If yes, what is the date of the plan?

2007-02-19

1.b. Has the Risk Management Plan been significantly changed since last year's submission to OMB?

no

COST & SCHEDULE

1. Was operational analysis conducted?

yes

1.a. If yes, provide the date the analysis was completed.

2008-05-09

What were the results of your operational analysis?

Launch and Landing tracks performance at a level higher than IT specific investments, which are imbedded in the various budget elements. Updates and changes to the Launch Control System must follow well-documented consistent processes to ensure compatibility with all flight system interfaces. Focus is on demonstrating desired performance while increasing reliability, usability, and maintainability, resulting in improvements to flight safety. Software changes follow industry recognized CMMI Level III approved reliable development processes. Requirements are generated by Shuttle Engineering specialists and reviewed with development engineers to ensure clear direction before beginning design. COTS and MOTS purchased products undergo receiving inspection in addition to verification testing. Hardware changes require a Certification Requirements plan describing the NSTS requirement paragraphs which may be affected, and a Certification Approval Request plan demonstrating compliance with all associated requirements. Prior to funding, all software and hardware changes to the LCS must be reviewed and approved by the IDS Configuration Control Board, a Level II Delegate Board. Large scale software/hardware changes which have the potential to impact multiple systems are reviewed on a case by case basis by the Engineering Review Board, the Risk Review Board and possibly require a formal Design Certification Review prior to implementation. The systems of the Launch Control System participate in the annual Planning, Programming, Budgeting, and Execution (PPBE) process to determine which assets require investment to bring their performance, or sustain their performance, within expected and acceptable operating parameters. This survey seeks technical data on system performance and cost, including cost payback based on investment versus sustained operations and maintenance cost, as well as a system risk assessment that characterizes system risk should the investment not be made versus system risk post investment. Cost, schedule, and risk are used to characterize and prioritize investment candidates during the process. Considerable weight is given to investments that mitigate significant safety risks. Cost-payback analysis is also considered a significant factor in analyzing which investments the Shuttle Program will make.